CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, hooked traction elements on at least a region of said surface.

2. The insert of claim 1 wherein said molded, hooked traction elements are configured to have at least one crook.

3. The insert of claim 1 wherein said molded, hooked traction elements are configured to have at least two crooks.

4. The insert of claim 1 wherein said molded, hooked traction elements are configured to have a mushroom-like shape.

5. The insert of claim 1 wherein said molded, hooked traction elements are not more than about 1 mm in height.

6. The insert of claim 1 wherein said molded, hooked traction elements are not more than about 0.5 mm in height.

7. The insert of claim 1 wherein said molded, hooked traction elements are not more than about 0.3 mm in height.

8. The insert of claim 1 wherein the density of said molded, hooked traction elements on said surface region is at least about $100/cm^2$.

9. The insert of claim 1 wherein the density of said molded, hooked traction elements on said surface region is at least about $130/cm^2$.

10. The insert of claim 1 wherein the density of said molded, hooked traction elements on said surface region is at least about 260/cm^2.

11. The insert of claim 1 wherein the density of said molded, hooked traction elements on said surface region is at least about 300/cm^2.

12. An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, twin-crooked traction elements on at least a region of said surface, wherein said traction elements are not more than about 0.4 mm in height and have a density on said surface region of at least about 130/cm^2.

13. An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, single-crooked traction elements on at least a region of said surface, wherein said traction elements are not more than about 0.3 mm in height and have a density on said surface region of at least about 260/cm^2.

14. An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising a compliant cushion having a tissue-engaging contact surface and having a plurality of molded, mushroom-like traction elements on at least a region of said surface, wherein said traction elements are not more than about 0.3 mm in height and have a density on said surface region of at least about 300/cm^2.

15. An insert for attachment to the jaw of a surgical clamp, said insert comprising a compliant cushion having a tissue-engaging contact surface and a plurality of molded, hooked traction elements located on

at least a region of said surface, wherein when said insert is attached to said jaw, a tractive force of between about 4 to about 10 pounds is provided on a vessel clamped by the clamp.

16. The insert of claim 15 wherein said tractive force is between about 6 to about 8 pounds.

17. An insert for attachment to the jaw of a surgical clip, said insert comprising a compliant cushion having a tissue-engaging contact surface and a plurality of molded, hooked traction elements located on at least a region of said surface, wherein when said insert is attached to said jaw, a tractive force of between about 1.5 to about 2.5 pounds is provided on a vessel clamped by the clip.

18. The insert of claim 17 wherein said tractive force is between about 1.5 to about 2 pounds.

19. A surgical instrument comprising at least one jaw having a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of molded, hooked traction elements on at least a region of said surface.

20. The surgical instrument of claim 19 wherein said molded, hooked traction elements are configured to have at least one crook.

21. The surgical instrument of claim 19 wherein said molded, hooked traction elements are configured to have at least two crooks.

22. The surgical instrument of claim 19 wherein said molded, hooked traction elements are configured to have a mushroom-like shape.

23. The surgical instrument of claim 19 wherein said molded, hooked traction elements are not more than about 1 mm in height.

24. The surgical instrument of claim 19 wherein said molded, hooked traction elements are not more than about 0.5 mm in height.

25. The surgical instrument of claim 19 wherein said molded, hooked traction elements are not more than about 0.3 mm in height.

26. The surgical instrument of claim 19 wherein the density of said molded, hooked traction elements on said surface region is at least about $100/cm^2$.

27. The surgical instrument of claim 19 wherein the density of said molded, hooked traction elements on said surface region is at least about $130/cm^2$.

28. The surgical instrument of claim 19 wherein the density of said molded, hooked traction elements on said surface region is at least about $260/cm^2$.

29. The surgical instrument of claim 19 wherein the density of said molded, hooked traction elements on said surface region is at least about $300/cm^2$.

30. A surgical clamp comprising at least one jaw having a compliant cushion having a tissue-engaging contact surface and a plurality of molded, hooked traction elements located on at least a region of said surface, and wherein a tractive force of between about 4 to about 10 pounds is provided on a vessel clamped by the clamp.

31. The surgical clamp of claim 30 wherein said tractive force is between about 6 to about 8 pounds.

32. A surgical clip comprising at least one jaw having a compliant cushion having a tissue-engaging contact surface and a plurality of molded, hooked traction elements located on at least a region of said surface,

and wherein a tractive force of between about 1.5 to about 2.5 pounds is provided on a vessel clamped by the clip.

33. The surgical clip of claim 32 wherein said tractive force is between about 1.5 to about 2 pounds.

34. An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising a compliant cushion having a tissue-engaging contact surface and having a plurality of hooked traction elements on at least a region of said surface at a density on said surface region of at least about $100/cm^2$.

35. The insert of claim 34 wherein the density of said hooked traction elements on said surface region is at least about $130/cm^2$.

36. The insert of claim 34 wherein the density of said hooked traction elements on said surface region is at least about $260/cm^2$.

37. The insert of claim 34 wherein the density of said hooked traction elements on said surface region is at least about $300/cm^2$.

38. A surgical instrument comprising at least one jaw having a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of hooked traction elements on at least a region of said surface at a density on said surface region of at least about $100/cm^2$.

39. The surgical instrument of claim 38 wherein the density of said hooked traction elements on said surface region is at least about $130/cm^2$.

40. The surgical instrument of claim 38 wherein the density of said hooked traction elements on said surface region is at least about $260/cm^2$.

41. The surgical instrument of claim 38 wherein the density of said hooked traction elements on said surface region is at least about $300/cm^2$.

42. An insert for attachment to a jaw-type surgical instrument adapted for grasping or occluding a vessel, said insert comprising a compliant cushion having a tissue-engaging contact surface and having a plurality of hooked traction elements on at least a region of said surface, wherein said traction elements are not more than 1 mm in height.

43. The insert of claim 42 wherein said hooked traction elements are not more than about 0.5 mm in height.

44. The insert of claim 42 wherein said hooked traction elements are not more than about 0.3 mm in height.

45. A surgical instrument comprising at least one jaw having a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of hooked traction elements on at least a region of said surface, wherein said traction elements are not more than 1 mm in height.

46. The surgical instrument of claim 45 wherein said hooked traction elements are not more than about 0.5 mm in height.

47. The surgical instrument of claim 45 wherein said hooked traction elements are not more than about 0.3 mm in height.

48. A method of occluding a vessel or other body conduit comprising the steps of: (a) providing a jaw-type surgical instrument comprising at least one jaw having a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality

of molded, hooked traction elements on at least a region of said surface; (b) contacting said clamping surface with a vessel or other body conduit; and (c) actuating said instrument to occlude said vessel or other body conduit.

49. A method of grasping tissue comprising the steps of: (a) providing a jaw-type surgical instrument comprising at least one jaw having a compliant clamping surface adapted for grasping or occluding a vessel, the clamping surface having a plurality of molded, hooked traction elements on at least a region of said surface; (b) contacting said clamping surface with tissue; and (c) actuating said instrument to grasp said tissue.